WHAT IS CLAIMED IS:

Sub C1

1. A communication method for a radio LAN system providing communication at a first transmission rate, said method comprising the steps of:

(a) time-divisionally distributing a first signal of said first transmission rate into n-1 second signals (n = 3, 4, ...);

(b) respectively converting said n-1 second signals into n-1 third signals of a second transmission rate less than said first transmission rate; and

(c) transmitting said n-1 third signals of said second transmission rate through radio transmission paths between n-1 radio base stations and a terminal station connected to at least one terminal unit.

2. The method as claimed in claim 1, wherein said second transmission rate is 1/(n-1) of said first transmission rate.

3. The method as claimed in claim 1, wherein:

said radio LAN system further comprises at least one redundant radio base station n; and

said method further comprises the steps of:

(d) transmitting a fourth signal through a

radio transmission path between said terminal station and said at least one redundant radio base station n, data of said fourth signal having a given relationship with data in signals transmitted between at least k ($k \leq (n-1)$) radio base stations of said n-1 radio base stations and said terminal station; and

(e) compensating, when at least one transmission path between said at least k radio base stations and said terminal station is interrupted, data of the signal to be transmitted through an interrupted transmission path based on said data of said fourth signal transmitted between said at least one redundant radio base station n and said terminal station.

Cl Cont.

4. The method as claimed in claim 3, wherein said given relationship in said step (d) is that said data of said fourth signal transmitted between said at least one redundant radio base station n and said terminal station is a summation of data of the signals transmitted between said at least k radio base stations and said terminal station for each given time slot.

5. The method as claimed in claim 1, wherein:

said radio LAN system further comprises at least one redundant radio base station n; and

said method further comprises the steps of:

(f) monitoring interruption of transmission paths between said n-1 radio base stations and said

terminal station; and

(g) compensating, when one of said transmission paths is interrupted, data of an interrupted transmission path by transmitting said data of the interrupted transmission path between said at least one redundant radio base station n and said terminal station.

C1 Cont.

6. A communication apparatus for a radio LAN system providing communication at a first transmission rate, said apparatus comprising:

rate-conversion-and-distribution means for time-divisionally distributing a first signal of said first transmission rate into n-1 second signals (n = 3, 4, ...) and respectively converting said n-1 second signals into n-1 third signals of a second transmission rate less than said first transmission rate; and

n-1 radio base stations transmitting said n-1 third signals of said second transmission rate to a terminal station connected to at least one terminal unit through radio transmission paths.

7. The apparatus as claimed in claim 6, wherein said second transmission rate is 1/(n-1) of said first transmission rate.

8. The apparatus as claimed in claim 6,

further comprising:

at least one summation means for generating a fourth signal by summing data of at least k ($k \leq (n-1)$) signals of said n-1 third signals of said second transmission rate every timeslots; and

at least one redundant radio base station n transmitting said fourth signal generated in said at least one summation means to said terminal station.

C1 Cont.

9. The apparatus as claimed in claim 6, further comprising:

at least one redundant radio base station n transmitting a signal to said terminal station;

line monitoring means for monitoring interruption of transmission paths between said n-1 radio base stations and said terminal station; and

switching means, when at least one of said transmission paths is interrupted, for forwarding a signal to be transmitted through an interrupted transmission path to said at least one redundant radio base station n.

10. A terminal station used in a radio LAN system having rate-conversion-and-distribution means for time-divisionally distributing a first signal of a first transmission rate into n-1 second signals (n = 3, 4, ...) and respectively converting said n-1 second signals into n-1 third signals of a second transmission rate less than said first transmission rate, and n-1 radio base stations transmitting said n-1 third signals of said second transmission rate to

said terminal station connected to at least one terminal unit through radio transmission paths, said terminal station comprising:

a receiver receiving said third signals of said second transmission rate transmitted from said n-1 radio base stations; and

rate-conversion-and-multiplex means for converting and multiplexing received third signals of said second transmission rate into signals of said first transmission rate.

11. A terminal station used in a radio LAN system having rate-conversion-and-distribution means for time-divisionally distributing a first signal of a first transmission rate into n-1 second signals (n = 3, 4, ...) and respectively converting said n-1 second signals into n-1 third signals of a second transmission rate less than said first transmission rate, n-1 radio base stations transmitting said n-1 third signals of said second transmission rate to said terminal station connected to at least one terminal unit through radio transmission paths, at least one first summation means for generating a fourth signal by summing data of at least k ($k \leq (n-1)$) signals of said n-1 third signals of said second transmission rate for every timeslot, and at least one redundant radio base station n transmitting said fourth signal generated in said at least one first summation means to said terminal station, said terminal station comprising:

a receiver receiving said third signals of said second transmission rate transmitted from said n-1 radio base stations;

rate-conversion-and-multiplex means for

converting and multiplexing received third signals of said second transmission rate into signals of said first transmission rate;

line monitoring means for monitoring interruption of transmission paths between said n-1 radio base stations and said terminal station;

at least one second summation means, when at least one of said transmission paths is interrupted, for generating a fifth signal by summing data of every timeslots of at least k signals of signals transmitted from said n-1 radio base stations except for a signal to be transmitted through an interrupted transmission path;

at least one subtraction means for generating subtraction data between data of the signal transmitted from said redundant radio base station n and data of said fifth signal generated in said second summation means; and

switching means for providing said subtraction data generated in said subtraction means to said rate-conversion-and-multiplex means instead of providing data of an interrupted signal detected in said monitoring means;

wherein even when at least one of signals transmitted from said n-1 radio base stations is interrupted, data of the interrupted signal is compensated.

12. A terminal station used in a radio LAN system having rate-conversion-and-distribution means for time-divisionally distributing a first signal of a first transmission rate into n-1 second signals (n = 3, 4, ...) and respectively converting said n-1 second signals into n-1 third signals of a second

transmission rate less than said first transmission rate, n-1 radio base stations transmitting said n-1 third signals of the second transmission rate to said terminal station connected to at least one terminal unit through radio transmission paths, at least one redundant radio base station n transmitting a signal to said terminal station, first line monitoring means for monitoring interruption of transmission paths between said n-1 radio base stations and said terminal station, and first switching means, when at least one of said transmission paths is interrupted, for forwarding a signal to be transmitted through an interrupted transmission path to said at least one redundant radio base station n; said terminal station comprising:

a receiver receiving said third signals of the second transmission rate transmitted from said n-1 radio base stations;

rate-conversion-and-multiplex means for converting and multiplexing received third signals of the second transmission rate into signals of said first transmission rate;

second line monitoring means for monitoring interruption of transmission paths between said n-1 radio base stations and said terminal station; and

second switching means, when at least one of said transmission paths is interrupted, for providing the signal transmitted form said redundant radio base station to said rate-conversion-and-multiplex means instead of providing a signal to be transmitted through an interrupted transmission path;

wherein even when at least one of signals transmitted from said n-1 radio base stations is interrupted, data of the interrupted signal is compensated.

add A2 add C2 add E3 add F1 add G1